Amendments to the Claims/Listing of Claims

Please amend claims 15-17, 19, 120-129, 132, 134 and 135. This listing of claims will replace all prior versions, and listings, of claims in the application.

1-14 (Canceled)

15. (Currently amended) A method for developing **improved** ligands **binding to** ~~**with increased**~~ PIM ~~**specificity**~~ **kinase**, comprising

identifying a molecular scaffold compound that binds to a binding site of the PIM kinase;

preparing a derivative of the molecular scaffold compound; and

testing **[[a]] said** derivative ~~**of a kinase binding compound**~~ for **binding to PIM with** increased **[[PIM]]** specificity **relative to the molecular scaffold compound**, wherein **said binding to PIM with** increased specificity is indicative that said derivative is **[[a]] an improved** ligand ~~**with increased PIM specificity**~~.

16. (Currently Amended) The method of claim 15, wherein said ~~**kinase binding**~~ **molecular scaffold** compound binds to at least 5 different human kinases.

17. (Currently Amended) The method of claim 15, wherein said ~~**kinase binding**~~ **molecular scaffold** compound binds to at least 10 different human kinases.

18. (Original) The method of claim 15, wherein said PIM is PIM-1, PIM-2, PIM-3, or any combination of at least two of PIM-1, PIM-2, and PIM-3.

19. (Original) A method for identifying a ligand binding to PIM-1, comprising

identifying a parent compound that binds to PIM-1;

preparing a derivative of the parent compound, wherein the derivative includes a core structure selected from the group consisting of Formula I, Formula II, and Formula III; and

determining whether **[[a]] the** derivative ~~**compound that includes a core structure selected from the group consisting of Formula I, Formula II, and Formula III**~~ binds to PIM-1 with altered binding affinity or specificity or both as compared to the parent compound.

20-119 (Canceled)

120. (Currently Amended) An in vitro method for obtaining improved ligands binding to PIM-1, comprising

identifying a molecular scaffold compound that binds to PIM-1 and interacts with one or more PIM-1 residues selected from the group consisting of residue 49, 52, 65, 67, 121, 128, and 186;

preparing a derivative of the molecular scaffold compound; and

determining whether **[[a]] the** derivative ~~**of a compound that binds to PIM-1 and interacts with one or more of PIM-1 residues 49, 52, 65, 67, 121, 128, and 186**~~ binds to PIM-1 with greater affinity or greater specificity or both than said **molecular scaffold** compound, wherein binding with greater affinity or greater specificity or both indicates that said derivative is an improved ligand.

121. (Currently Amended) The method of claim 120, wherein said derivative has at least 10-fold greater affinity or specificity or both than said **molecular scaffold** compound.

122. (Currently Amended) The method of claim 120, wherein said derivative has at least 100-fold greater affinity or specificity or both **than said molecular scaffold compound**.

123. (Currently Amended) The method of claim 120, wherein said **molecular scaffold** compound has a chemical structure of Formula I, Formula II, or Formula III.

124. (Currently Amended) An in vitro method for developing ligands specific for PIM-1, comprising

identifying a molecular scaffold compound that binds to a plurality of different kinases;

preparing a derivative of the molecular scaffold compound; and

determining whether **[[a]]** **the** derivative ~~**of a compound that binds to a plurality of kinases**~~ has greater specificity for PIM-1 than said **molecular scaffold** compound.

125. (Currently Amended) The method of claim 124, wherein said **molecular scaffold** compound binds to PIM-1 with an affinity at least 10-fold greater than for binding to any of said plurality of **different** kinases.

126. (Currently Amended) The method of claim 124, wherein said **molecular scaffold** compound interacts with at least one **[[of]]** PIM-1 ~~**residues**~~ **residue selected from the group consisting of residue** 49, 52, 65, 67, 121, 128, and 186.

127. (Currently Amended) The method of claim 124, wherein said **molecular scaffold** compound is a compound of Formula I, Formular II, or Formula III.

128. (Currently Amended) The method of claim 124, wherein said **molecular scaffold** compound binds weakly to said plurality of kinases.

129. (Currently Amended) An in vitro method for developing ligands binding to PIM-1, comprising

identifying as molecular scaffolds one or more compounds that bind to a binding site of PIM-1;

determining the orientation of at least one molecular scaffold in co-crystals with PIM-1; **[[and]]**

identifying chemical structures of said molecular scaffolds, that, when modified, alter the binding affinity or binding specificity or both between the molecular scaffold and PIM-1; and

synthesizing a ligand wherein one or more of the chemical structures of the molecular scaffold is modified to provide a ligand that binds to PIM-1 with altered binding affinity or binding specificity or both.

130. (Previously presented) The method of claim 129, wherein said molecular scaffold is a weak binding compound.

131. (Previously presented) The method of claim 129, wherein said molecular scaffold binds to a plurality of kinases.

132. (Currently amended) The method of claim 129, wherein said molecular scaffold interacts with one or more **[[of]]** PIM-1 residues **selected from the group consisting of residues** 49, 52, 65, 67, 121, 128, and 186.

133. (Previously presented) The method of claim 129, wherein said molecular scaffold has a chemical structure of Formula 1, Formula II, or Formula III.

134. (Currently Amended) An in vitro method for developing a ligand for a kinase comprising conserved residues matching one or more **[[of]]** PIM-1 residues **selected from the group consisting of residues** 49, 52, 65, 67, 121, 128, and 186, comprising

determining whether a compound of Formula I, Formula II, or Formula III binds to said kinase;

identifying chemical structures of said compound, that, when modified, alter the binding affinity or binding specificity or both between the compound and said kinase; and

synthesizing a ligand wherein one or more of the chemical structures of the compound is modified to provide a ligand that binds to said kinase with altered binding affinity or binding specificity or both compared to said compound.

135. (Currently amended) The method of claim 134, wherein said kinase comprises conserved residues matching at least 2 **[[of]]** PIM-1 residues **selected from the group consisting of residues** 49, 52, 65, 67, 121, 128, and 186.

136. (Previously presented) The method of claim 134, wherein said kinase comprises conserved residues matching PIM-1 residues 49, 52, 65, 67, 121, 128, and 186.

137. (Previously presented) The method of claim 134, further comprising determining whether said compound modulates said kinase.

138. (Previously presented) The method of claim 134, wherein said determining comprises computer fitting said compound in a binding site of said kinase.

139. (Previously presented) The method of claim 134, further comprising forming a co-crystal of said kinase and said compound.

140. (Previously presented) The method of claim 139, further comprising determining the binding orientation of said compound with said kinase.

141. (Previously presented) The method of claim 134, wherein said kinase has at least 25% sequence identity to full-length PIM-1.

Amendments to the Tables

Please replace Tables 2 and 3 (pages 154-164) with the replacement sheets provided herewith.